

FIG. 1

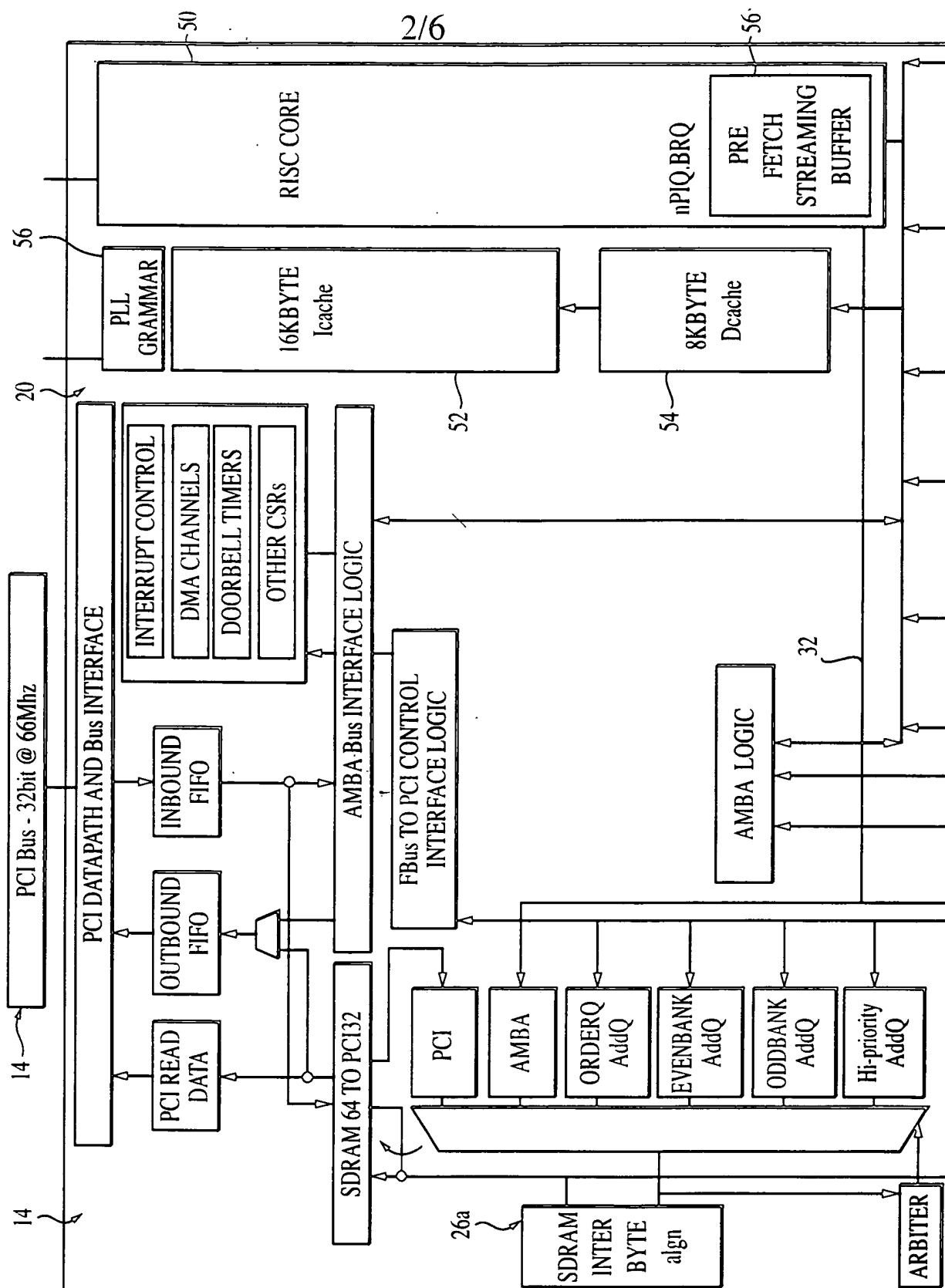


FIG. 2-1

FIG. 2-1  
FIG. 2-2

FIG. 2

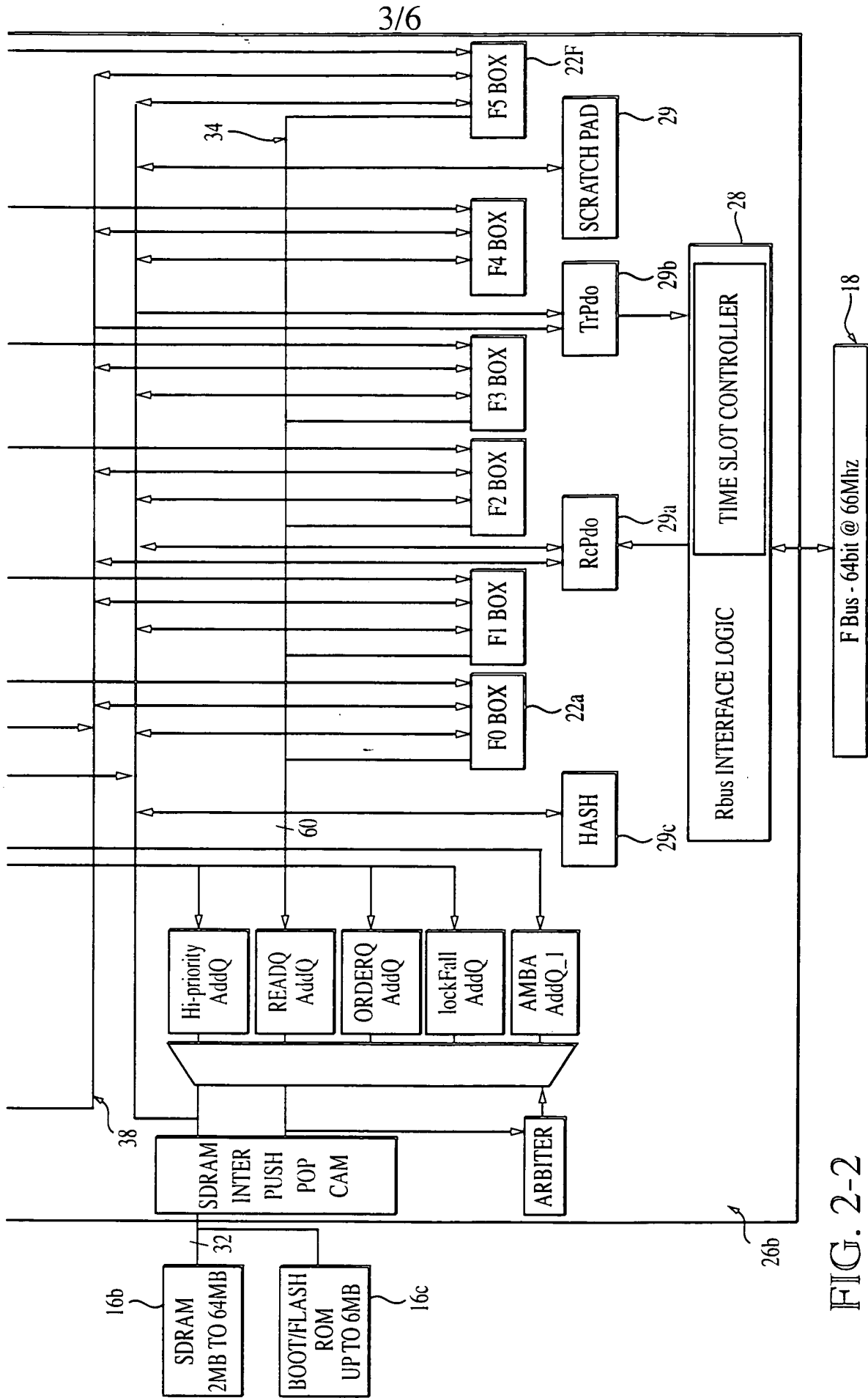


FIG. 2-2

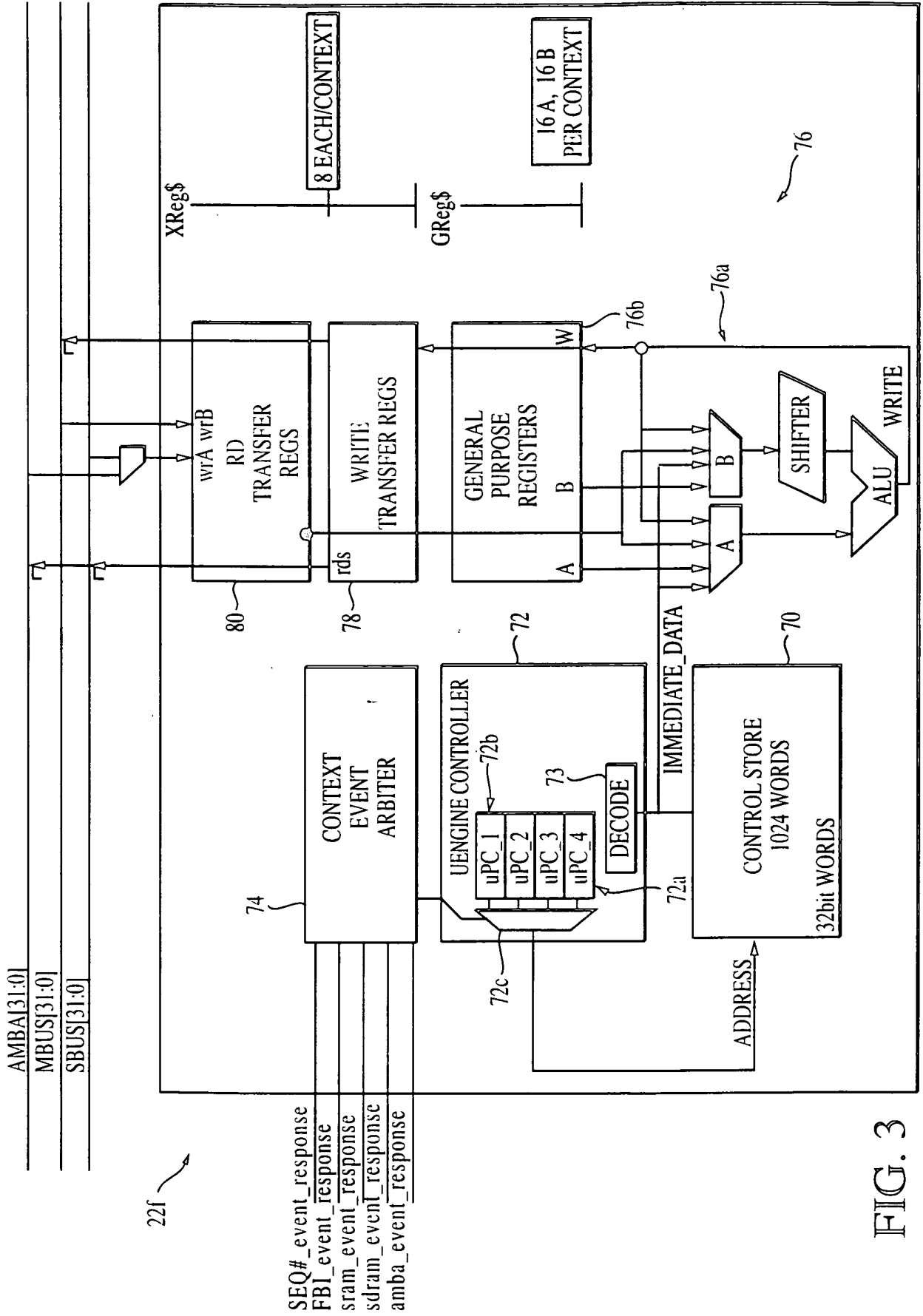


FIG. 3

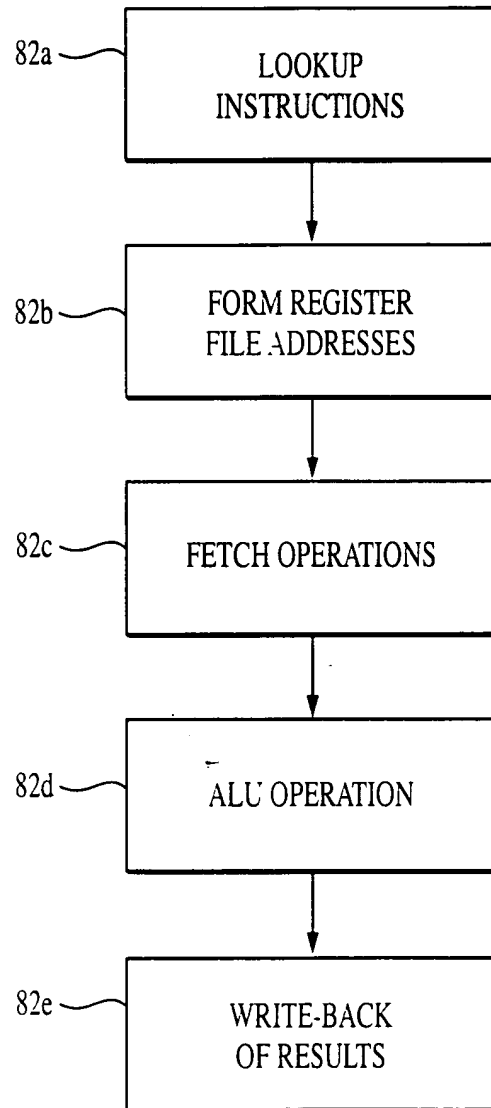


FIG. 4

ALU/SHIFT (set cc)	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	0	0	sw	shift	rel	dest	reg		amount	rs	A	rel	source		B	rel	source		ro	im	Bi											ALUOp
	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	0	0	sw	shift	rel	dest	reg		amount		A	rel	source		B	rel	source		I	O												ALUOp
ALU/SHIFT (set cc)	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	0	0	sw	shift	rel	dest	reg		amount		A	rel	source		B	rel	source															
	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	0	0	sw	shift	rel	dest	reg		amount		A	rel	source		immediate																	
ALU/SHIFT (set cc)	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	1	0	0	dest	reg				sw	A	absolute	source		loB	Abs	Sec		Up	B	Srl												ALUOp
	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	1	0	0	dest	reg				sw	A	absolute	source		loB	Abs	Sec		Up	B	Srl												ALUOp

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# Shift Decode:

(rs,r0) decode ([31:0] shifts into [63:32] and take [63:32]):

00 = left rotate

01 = right shift (32-ShfAmt = Right Shift Amt)

10 = left shift

11 = double shift ( upper A-op shifts into lower B-op)

==> "left rotate" of zero gives zero shift (therwise zero amount signifies indirect shift)

# ALU-OP decode:

0000 = B

0001 = ~B

0010 = A&B (and)

0011 = A&~B (and~)

0100 = ~A&B (~and)

0101 = XOR

0110 = OR

0111 = mul-stuff

1000 = A-B

1001 = B-A

1010 =

1011 =

1100 = A+B(8)

1101 = A+B(16)

1110 = A+B

1111 = A+B+Cin

FIG. 5